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I.—*Ornithological Notes from the Neighbourhood of Cape San Antonio, Buenos Ayres.* By ERNEST GIBSON, F.Z.S.

[Continued from 'The Ibis,' 1879, p. 424.]

12. CONURUS PATAGONUS. "Barranquero."

Very abundant, but not a resident. From the middle of April to the end of November they pass and repass over our land, coming from the S.W. in the morning, and returning in the evening. They are generally most numerous in the colder months; and my daily notes give no instance of any seen during the months of December, January, February, and March. Sometimes a solitary individual passes; but they are really gregarious, the flocks averaging, say, twenty. On some occasions, and particularly in the afternoon, these flocks may be counted by the hundred. While flying, the members of each party call frequently to one another, as well as to any other flock. The cry is loud, short, but not altogether inharmonious. In the morning they fly low, and frequently sweep quite close down to the ground in a compact body. The native boys often kill one or two birds out of a flock when it passes near them, by taking advantage of this habit and

throwing a twisted piece of fencing-wire into their midst. In the morning the flocks generally adopt a line which takes them over several of our woods, where they alight (as if tired and dubious of their way) while they chatter among themselves for a few minutes, and then take to flight again, sometimes following the calls of another passing flock, or induce the latter to settle beside them and share the consultation. In the evening again they fly high, and rarely alight.

Now the direction all these birds take is towards the rincones, and though I have not actually found them feeding there; the contents of various crops examined have invariably proved to be vegetable, apparently the inner stems or young shoots of some esparto or other grass ("shoots or buds of some plant or grass," my notes say, "white, tender, about $\frac{1}{8}$ inch long, and slender"). This, however, does not quite agree with what Mr. Durnford found to be their food in the Chuput valley, whence, in November, he writes, "They fed on the young leaves of a species of thorn, the stomach of one shot on the 24th November being crammed with these;" and again, from Baradero, in the north of this province, that they feed "chiefly on buds and the seed of sena-sena, a species of *Acacia*, very common here."

None of these visiting our district pass the night here; and the nearest breeding-locality is, I suppose, the cliffs or barrancas (hence the name "Barranquero") of the arroyos on this side of the Sierras de Tandil.

They are not very shy (though more so than *Bolborhynchus monachus*), and frequently alight on the corrales and trees in the immediate vicinity of houses. Indeed I have been told that they are rather partial to the roofs of ranchos in some districts, where, in the early morning, they make havoc with the thatch, and rouse the inmates with their noise.

The flight is powerful and rapid, but rather wavering, as if the lengthy tail were inadequate to the duty of keeping its owner steady.

Italians and other foreigners shoot them for the pot; but I fancy that, however savoury, *C. patagonus* is rather a tough morsel.

13. *BOLBORHYNCHUS MONACHUS*. "Loro."

In thousands. All the woods are full of their great nests, with their bright-coloured talkative denizens; all day long rises their noisy chatter, drowning almost every other sound in wood and garden; and, lastly, all the apples, pears, peaches, and medlars in said garden meet with their but too thorough appreciation.

This species, like the last, is gregarious, feeding in flocks and building in communities.

It is one, too, that I have rather an animosity against; for, like the Lapwing (*Vanellus cayennensis*) in the plains, it plays the part of sentinel to all its feathered neighbours. One steals gently through the underwood, stalking some wary bird of prey or flock of tree-building Teal, and glancing up in a deprecatory way at the Perroquets' nests—but all in vain: the subdued chatter suddenly becomes an ominous silence (sufficient betrayal in itself); a hundred pairs of black beady eyes survey the intruder from the nests and neighbouring branches; and then there follows the whirring of as many wings, while a row arises that would put all the Rooks that ever "caw'd" to shame. Gone is the warned quarry, while the exasperated writer of these notes makes a hasty calculation as to which is the largest group of Perroquets, and knocks over half a dozen accordingly, "to encourage the rest."

The nests are frequented all the year round; and it is of rare occurrence to find any large one totally deserted during the day.

During the summer and autumn the thistle is the principal food of *B. monachus*. In the former season the flowering thistle-heads are cut off, and generally carried to the top of the nearest tree, there to be pulled to pieces for the sake of the green kernel. In the autumn, when the ripe seeds have fallen, they are sought for on the ground.

Early morning, just between daybreak and sunrise, is the favourite hour for their depredations in the garden, though scores frequent it during the day also. They never carry off the fruit, but gnaw at it as it hangs, abandoning one apple for another, and that for a third, in a most destructive manner.

To show how little does shyness enter into their constitution, I have known seventy-five to be shot in the garden in the course of a forenoon, the fowler standing in the open, close to a dead tree, which formed their favourite perch on arriving from the surrounding woods. The Basques and Italians who come from the neighbouring township for a day's Perroquet-shooting, scorn to fire at any group that will not yield four or five dead birds at least, and, indifferent shots as they are, kill as many as they can carry. Apropos of these fellows, I once came upon one who, having just reloaded his old gun, was in the act of recapping it. To do so he had placed the muzzle against a fallen tree, and, with the butt jammed into the pit of his stomach, was pulling up the dog-heads with one hand while he put on the caps with the other, "con que me fuí" ("upon which I went"), as the Spaniards would say; for I incontinently turned and fled!

The flight of *B. monachus* is rapid, with quick flutters of the wings, which seem never to be raised to the level of the body, nor yet brought sufficiently forward. Like *Conurus patagonus*, too, the straight unexpanded tail fails to keep the bird on an even keel as it were, first one side rising higher and then the other.

While the presence of Carancho or Chimango is ignored, any other bird of prey is generally mobbed when it first appears in the woods. All the Perroquets rise in a regular crowd, and hover over and above it, screaming and chattering angrily.

Young birds are sometimes taught to speak; but their articulation is, as a rule, indistinct. I remember hearing of one, however, which was seized and carried off by a Carancho, giving utterance to its despair in a singularly appropriate exclamation—"Ay de mi, ay de mi" (alas! alas!). Imitations of poultry &c. are very faithfully rendered. One, which had escaped from its owner, long retained the hoarse "Pretty Poll" it had acquired in captivity, no doubt to the envy of its uneducated relatives, and to my frequent bewilderment as I strolled through the wood it frequented.

Breeding-Notes.—The nests are generally suspended from the extremities of branches, to which they are firmly built or woven in. The new nests consist only of two chambers, the porch and nest proper, and are built and inhabited by a single pair of birds. These become gradually added to, till plenty of them come to weigh perhaps a quarter of a ton each and are of a bulk enough to fill a large cart. Thorny tala twigs (no branches), firmly interlaced, form the only material; and there is no lining to the chambers, even in the breeding-season. Some old forest trees have seven or eight of these huge masses suspended to their branches, while the ground underneath is strewn with twigs and the remains of fallen nests. The entrance to the chambers is almost invariably underneath, or, if on the side, is protected by the overhanging eave, doubtless in both cases as a safeguard against the attacks of the opossum (*Didelphys aurita*). These entrances lead into a porch or outer chamber; and the latter communicates with the breeding-chamber. There is no interior communication between these sets of apartments; and each set is inhabited, in the breeding-season at least, by only one pair of "Loros." The number of pairs perhaps never exceeds a dozen, even with the largest nests. Repairs are carried on all the year round; but additions and new nests are only formed towards the spring.

Opossums are frequently found in one or other of the upper chambers, the entrance having been made too high, and so affording access. But though they take up their abode there, they cannot force their way into the remainder of the nest; and the Perroquets refuse to be driven away. In fact, the latter are most aggravatingly obstinate on the question of their manorial rights. Notwithstanding all our efforts, two or three nests are now established in the garden itself, in some fine old pine trees; and there the birds sit all day and hack off the twigs, or descend onto the fruit-trees and eat peaches. I have picked off these squatters through the day, and banged whole handfuls of shot into the nests at night, besides frequently pulling down the latter; but the "Loros" could give Bruce's famous spider heavy odds in the perseverance line of

business, and beat it then ; so it is not surprising that they have had the best of the warfare.

A species of Teal breeds in the nests of *B. monachus* ; and in one case I found an opossum domiciled in an upper chamber, Perroquets occupying all the others but one, in which a Teal was sitting on eggs.

The breeding-season does not begin till about the 1st of November ; but I have taken eggs as late as the 19th of December. Seven and eight are the largest clutches taken ; but I have never seen more than six of these hatched out. As I said before, the eggs are laid on the thickly matted flooring of the second or inner chamber, and without any preparatory lining.

Thirty-one specimens give an average measurement of $1\frac{5}{40} \times \frac{32}{40}$. The largest is $1\frac{8}{40} \times \frac{33}{40}$, and the smallest $1 \times \frac{31}{40}$. They are white in colour, but of a dull or opaque white, very thin-shelled, and, besides being elongated in appearance, have generally their greatest diameter exactly equidistant from the two ends ; so that, in fact, they cannot be said to have a big and a small end.

14. COLUMBA PICAZURO.

(I had supposed this to be *C. maculosa*, but now learn that *C. picazuro* is more likely to be our species, as it is that of Buenos Ayres, *C. maculosa* occurring near Mendoza and again, further south, in Patagonia.)

Common, but only abundant in the winter months. Those few seen during the summer have remained to breed ; but the majority make their appearance about the beginning of May, and leave at the end of September.

In the months of June and July the “chamico” (*Stramonium*) principally supplies this Pigeon with food, the nutritive oily seeds then falling from the ripened seed-vessels, and attracting flocks of from ten to a hundred of this species. At the end of August I have found the crop filled with leaves of the “carretilla” (a trefoil), while in May and August large flocks frequent the offal-ground of the killing-establishment. Indeed I have more than once observed it at recently skinned

carcasses of sheep, before the Caranchos and Chimangos had made their appearance.

At night they roost on the summits of the highest tala trees, arriving at certain favourite spots just before sundown, but never exceeding a hundred in any one locality.

The voice, as Mr. Hudson justly remarks, is the most agreeable Dove-melody conceivable; and at certain seasons our woods seem filled with its soft murmurs.

A few frequent our garden; and they have twice bred there; but *C. picazuro* is rather a timid bird, and prefers, as a rule, the quietness of the woods.

Breeding-Notes.—It breeds in the months of November and beginning of December, the nest, a shallow light structure of sticks and twigs, being placed either in the centre of the tree or at the extremity of a branch, at a height of generally fifteen feet from the ground. One was constructed in a pollard acacia in the garden, being lodged among the thick young shoots, but close to the trunk of the tree.

Six years' researches have only yielded me as many nests of *C. picazuro*—two in 1873, and four in 1875. These six nests only contained *one* egg each; and as it happened that they were all more or less incubated, I came to the conclusion that here was a Pigeon which departed from the usual rule, and, instead of two eggs, laid only one. The evidence in support of the case is, I think, sufficiently conclusive; and I should now like to learn if the fact has already been recorded, and if this exception to the general rule is unique*.

The six eggs average $1\frac{2}{4} \times 1\frac{5}{4}$, the largest being $1\frac{2}{4} \times 1\frac{5}{4}$, and the smallest $1\frac{2}{4} \times 1\frac{4}{4}$. The variation in size is very considerable; and the same may be remarked of the shape, the shortest specimen having the greatest diameter, for example.

15. COLUMBULA PICUL.

This species was not uncommon in the winter of 1874, two or three small flocks of from two to half a dozen frequenting

* [The Crowned Pigeons (*Goura*) and several other Pigeons that have bred in the Zoological Society's Gardens lay but one egg.—EDD.]

the garden and lucern-patch. In 1876 I caught a glimpse of one in the garden, also during the winter months ; but, with this solitary exception, I have no note of its appearance, either before or since 1874.

It struts and runs about the ground in the usual pigeon-fashion, and is by no means shy.

16. ZENAIDA MACULATA.

Very abundant, indeed even more so than *Bolborhynchus monachus*. In the breeding-season every tree or bush seems to contain a nest, and the sitting birds rise at every step one takes.

It feeds on thistle and other seeds, and is a great frequenter of our patio (courtyard), where it associates with various other birds, and secures a share of the débris from the kitchens.

Not so stately in its gait as *C. picazuro*, its familiarity and pretty ways still render it a general favourite. I may also note that it is less gregarious in its habits than *C. picazuro*.

Breeding-Notes.—The breeding-season lasts from the beginning of September to the end of March. The nests are placed in any tree or bush, sometimes within two or three feet of the ground. A large densely foliated coronillo tree often contains two or three nests with eggs, to say nothing of those of former years. These sometimes serve as the basis of a new nest ; but, as a rule, a fresh site is chosen annually ; and the platform-like structure of dead sticks and twigs, occasionally cushioned with some dry grass or a few feathers, is quickly ready for the two eggs.

The eggs are white, like those of *C. picazuro*, but of a greater diameter in proportion to their length. Twenty-five specimens average $1\frac{7}{40} \times \frac{35}{40}$, and vary from $1\frac{11}{40} \times \frac{36}{40}$ to $1\frac{4}{40} \times \frac{33}{40}$.

17. GUIRA PIRIRIGUA (Vieill.). Native name "Uraca."

Common, but irregular in its appearance. It is most abundant in the winter ; and only a few remain through the summer. It is a noteworthy fact that the latter should be the case here ; for at Baradero, in the north of the province,

it is exactly reversed. Mr. Durnford writes, "A few remain with us all the winter, but the majority leave after the breeding-time."

Here it is gregarious, the flocks ranging up to twenty in number. These frequent the woods and, occasionally, the swamps.

In the winter mornings, just at sunrise, one frequently surprises them in the woods, enjoying the grateful warmth of the sun in a rather peculiar fashion: they all have their backs to it, and drop the wings in such a way as to expose that sparsely-feathered part to the heat. In roosting, again, they crowd together in a row on some horizontal branch in a well-sheltered corner, facing different ways in exactly alternate order; so that the arrangement of the drooping tails makes the group look rather puzzling at first, till one becomes acquainted with the habit.

In flight it is slow and very feeble, and on alighting on a tree or, more noticeably, on the ground, the long tail is like to make its owner perform an involuntary somersault.

The general cry is a harsh scream, with which all intruders are greeted; but it has also a rarer and much more musical note, in the utterance of which it is so jealous that I could never yet get a glimpse of the bird in order to see the way in which it is produced. It consists of a regular gamut, beginning at the high note, and descending with great fidelity through four or five others, till it dies away. The notes are equally regular in time and duration, and most charmingly plaintive and musical in sound.

Natives have told me that young birds, taken from the nest, can be taught to speak, which I do not consider unlikely, from the strange construction of the tongue.

As I said, any intruder is received with the harsher language; and the whole flock will congregate on the surrounding trees (the summits of which are generally preferred) within a few yards of him.

Guira piriguá, as may have been gathered from the foregoing notes, is by no means shy, and not only may be closely approached in the woods, but ventures of its own accord

among the buildings and yards of the head station. I once saw a solitary individual in the garden, however, whose existence was being rendered miserable by the persistent attacks and persecution of a specimen of that well-named species *Pitangus bellicosus*.

To the list of food furnished by Mr. Durnford ("snails, slugs, and bits of meat or offal") I may add a small frog, about the size of half a walnut, and which is sought for in the lucern-patch. This is swallowed entire, as I have often found on dissection of the birds.

Breeding-Notes.—Before my arrival in Buenos Ayres, I was aware of the beauty and unique style of colouring of the egg, and consequently have always hunted diligently for nests; but I regret to say that my researches, though not altogether fruitless, have not been so well rewarded as they deserve. The natives, in answer to my inquiries, told me that it bred only in the autumn, which information, as far as my experience goes, has proved to be correct. This agrees with Mr. Durnford's Baradero statement, that it has "two broods in the season."

One nest I heard of was placed among tall dead thistles (off the ground), in the plains, but near a house. It had eggs; but of its construction I could gather nothing from my informant. Time, end of summer.

The second case consisted of a single egg, brought to me some time in autumn. The nest, situated in one of the woods of the head station, seemed to be nothing more nor less than a deserted Wood-Pigeon's. No birds seen.

The particulars of my only personal discovery I will extract verbatim from my note-book:—"18th March, 1876. Clutch of four, considerably incubated. Birds first observed on 10th inst. Generally only a pair about, but on one occasion observed no less than fourteen. Nest placed in top and centre of a very thick coronillo tree, about nine feet from the ground. Size of a Thrush's, and consists entirely of thorny twigs, with a lining of *green* elder-tree leaves."

These four eggs have an average measurement of $1\frac{1}{4} \times 1\frac{7}{10}$; consequently they are larger than might have been expected

from the size of the bird, besides being more spherical than oval in their shape. It is to their appearance, though, that I would more particularly allude. The ground-colour is a pure pale blue, over which is spread a white incrustation of lime, in such a way that it resembles a piece of lace thrown over the egg. The latter marking being in relief also, adds to the peculiarity of the egg, and, with the exception of that of *Nothura maculosa*, makes it the most beautiful and striking object in my collection.

18. *CHRYSOPTILUS CRISTATUS*. Native name "Carpintero."

Not uncommon, by which I mean that every large wood contains at least one pair. The group of woods surrounding the head station boasts of two pairs; and during the last two years one of them has bred in the garden.

Its beauty, familiarity, and clear metallic cry render it a most noticeable and general favourite.

The flight is rapid, though low, and never long sustained, and is marked by alternate rises and falls.

What struck me as a peculiarity was the habit of frequently perching on the top of a tree or bush, or on one of the branches, though its most general attitude is the regular Woodpecker one—against a tree-trunk, and supported by its tail. In this position, with the mottled yellow and black plumage relieved by the conspicuous crimson crest, and the head turned watchfully to one side as it rings out the well-known call, no bird looks more attractive.

As our tala woods contain any amount of old trees, and are infested by thousands of insects and grubs, it is surprising this species does not increase. However, traces of its indefatigable researches are visible nearly everywhere; and I count a score of old breeding-places in the course of an hour's walk.

C. cristatus will coolly survey one from within a few yards' distance, retreating from tree to tree if approached too closely, but rarely dodging behind tree-trunks or showing much trace of suspicious fears. Nay, the very boldness with which it utters its cry indicates a total disregard for bipeds and shot-

guns. The annexed breeding-notes witness to its confidence when nesting.

Breeding-Notes.—The excavation for the nest is begun as early as September; but the eggs are only laid during the first half of October. The hole is generally commenced where some branch has decayed away; but care is taken that the remainder of the tree is sound. It opens at a height of from six to nine feet from the ground, and is excavated to a depth of nearly a foot. Occasionally it is sufficiently wide to admit of one's hand; but such is not always the rule. No preparation is made for the eggs beyond the usual lining of some chips of wood.

The pair which frequented the garden excavated a hole in a paraiso tree, and bred there for two consecutive years. The tree stood near one of the walks; and on any one passing, the sitting bird immediately showed its head at the aperture, like a jack-in-the-box, and then flew away. Last year this pair actually bred in one of the posts of the horse-corral, notwithstanding the noise and bustle incident to such a locality. While waiting there, at sunrise, for the herd of horses to be shut in, I used often to knock at the post, in order to make the Woodpecker leave its nest; but the bird seemed indifferent to such a mild attack, and would even sit still while a hundred horses and mares rushed about the corral or hurled themselves against the sides of it. In another case I had worked with hammer and chisel for half an hour, cutting a hole on a level with the bottom of a nest, when the female first demonstrated her presence by flying out, almost into my face. This last nest contained four (considerably incubated) eggs, which I took. Happening to pass the spot a fortnight after, I inspected the hole, and was surprised to find that it had been deepened, and other five eggs laid, while the entrance I had cut was the one now used by the birds. The nest was again resorted to the following year, and a brood hatched out; but since then a pair of Wrens have occupied the place, to the exclusion of the rightful owners.

The glossy pear-shaped eggs (four or five to the nest) have an average measurement of $1\frac{2}{40}$, or $1\frac{3}{40} \times \frac{3}{40}$. A dozen spe-

cimens show a variation in length of from $1\frac{1}{40}$ to $1\frac{5}{40}$, but otherwise present no noteworthy peculiarity.

I once saw two or three young, full-fledged, which had been taken from the nest. They were quickly tamed, and used to sit in the warm sun and look out for red ants, but, unfortunately, did not live long.

19. GEOSITTA CUNICULARIA.

This is a most common bird in the campo or plains, to which it is confined, though one may notice it about the borders of any wood also, should there be a biscachero situated near. It has a trick of rising in front of one, flying a few yards, and alighting again—a performance which it continues to repeat in a manner that soon makes its dull uninteresting appearance familiar to a stranger. I don't think I ever saw more than one pair frequenting any biscachero; nor is it ever gregarious in its habits. The flight is fairly quick and strong, but never prolonged; and it chooses the ground to alight on in preference to trees or thistles. There its attitude is upright, and in gait &c. it approaches nearer the Thrushes. From this, and the reddish hue of the plumage, I have often taken it at the first glance for the Red Oven-bird (*Furnarius rufus*).

From never having dissected a specimen, I am unable to state the nature of its food; nor yet have I ever observed it feeding in the camp.

Breeding-Notes.—*G. cunicularia* is one of our earliest-breeding birds, eggs being usually taken in the first half of September, the range extending from the 28th of August to the 5th of November, according to my notes. On the 16th of August I have seen the excavation of a nest begun. This (with us at least) is invariably situated in the brow of one of the burrows of a biscachero (colony of *Lagostomus trichodactylus*); and as a new one is made every year, it is often difficult to tell which hole to open up. The passage varies in length from two to four feet, with a slight downward tendency, and terminates in a cavity shaped like a cocoa-nut, but a little larger. This is prepared for the reception of the eggs by a pile or cushion of soft dry grass, sometimes very

sparse. The slope of the passage I have always found to be correctly calculated, so as not to disconcert the bird by a possible emergence into the open air should the ground fall away behind the burrow. The bird sits close, and may often be excavated with the nest.

Three is the general number of eggs laid ; and I only once recollect taking a nest with four. The colour is white. Twenty-four specimens give an average measurement of $\frac{3.8}{4.0} \times \frac{2.8}{4.0}$. The variation in size is pretty considerable.

Hirundo leucorrhoa (Vieill.) not unfrequently occupies and breeds in a deserted nest of *Geositta cunicularia*.

20. MOLOTHRUS BONARIENSIS.

A species but too common, as my oological experiences have often proved.

One sees it everywhere—in the plains, the woods, and the swamps. It is one of the most regular and abundant frequenters of the patios or courtyards, where the beautiful glossy black plumage of the male reflects the sunlight in all the metallic tints of blue, green, purple, and violet, as it runs about within a few yards of the observer, or gives utterance to its note (a peculiar gurgle, as if it had water in its throat). It has the Starling-like habit of craning up its head to observe any distant or suspicious object, and, also like that bird, may often be seen perched on the backs of the cattle or sheep.

At times, generally in the winter months, as far as some insufficient notes bear me out, it gathers into flocks ; and these flocks seem to consist principally of males. However, it is at all times semigregarious in its habits.

Though it lays in the nests of a considerable number of other birds, the Sparrow (*Zonotrichia pileata*, Bodd.) is the most highly distinguished of all in that respect, and is the only one I have ever seen feeding the young bird. The latter follows its foster-mother for some time after leaving the nest, and, with open gape, may be seen perpetually clamouring for food, which the unfortunate little Sparrow must find hard to supply in sufficient quantity.

I may here insert the following note, dated end of February :—"Saw what I took to be two young of this species, perched on the back of a sheep. Both were in the usual immature grey plumage ; but in addition one had a dark patch on the back of head, another on neck, and a third on the back, embracing part of the wings." I have never since seen a specimen with similar markings, the type being, as already noted, of a uniform grey in the young.

Independent of its parasitical habits, it causes great destruction among the smaller birds by puncturing and sucking their eggs on every possible occasion. Bitter experience has taught me the folly of ever leaving any nest of eggs till the full clutch should be laid ; for some of these black thieves are sure to be watching one's actions, with a result that may be imagined but is too painful to describe.

The food is very varied, as might be inferred from the general distribution of the bird ; and nothing, either of an animal or vegetable nature, seems to come amiss to it. In company with *Amblyramphus holosericeus*, it takes a too kind interest in the maize-patch, and also frequently associates with *Pseudoleistes virescens*, on the principle, I suppose, that "birds of a feather flock together"—*P. virescens* being semiparasitical, worse luck to it !

Breeding-Notes.—*M. bonariensis* is parasitical on the following birds :—the Sparrow (*Zonotrichia pileata*), Wren (*Troglodytes furvus*), Red Oven-bird (*Furnarius rufus*), *Pseudoleistes virescens*, Thrush (*Turdus rufiventris*), *Chrysomitris magellanica*, *Leptasthenura ægithaloides*, *Progne tapera*, *Lichenops perspicillata*, Scissor-Bird (*Milvulus tyrannus*—ten species in all, though this list may doubtless be easily added to.

My specimens were mostly taken in one season ; so that I can only state approximately the duration of the breeding-season—namely, from 20th October to 10th January. It is likely, however, that it begins to breed earlier.

Four was the largest number taken out of one nest (that of a Wren) ; and these were in various stages of incubation.

Forty-seven specimens average $\frac{35}{40} \times \frac{29}{40}$, with some considerable variation. They are round in shape, and strong-shelled, the colour a glossy white or bluish white.

21. FURNARIUS RUFUS. (Red Oven-bird.) Native name "Hornero."

That this species is abundant I need not say ; and it is also probably one of the best-known of our Buenos-Ayrean birds. It is confined almost entirely to the woods ; for the open plains are unsuited to its building-habits. But any rancho, however solitary, can boast of a pair, as it only wants something to perch its nest upon.

Its appearance is uninteresting, though its gait (which is like that of a gigantic Robin) is rather amusing. The only note or cry it possesses is also rather peculiar, being a succession of loud (but not unmelodious) short notes, accompanied by a corresponding agitation of the wings, similar to, but more rapid than, that of the Cock when it crows. The wings, however, do not strike the body. It is by no means chary of its voice either, and may be heard constantly, not only through the woods, but about the houses ; for it is nearly as fearless as the Sparrow.

The flight, again, resembles that of a Thrush, though perhaps it is neither so rapid nor so strong.

Breeding-Notes.—Well might Mr. Durnford remark that "its breeding-habits are rather irregular ;" for it begins to build in the autumn, and sometimes takes all the winter to finish its nest. The work is mostly done in the morning ; and how carefully the mud is mixed and tempered (in little balls) may be inferred from the strength of the nest. When once dry it will easily support a man's weight ; and my usual method of getting at the eggs is by cutting a hole in the side with a strong knife. The naturalist cannot but wonder at the extraordinary instinct which teaches the bird how to break the regular round of the foundation in order to form the entrance, to make that entrance of such a nature as to be easily defended by the parent bird against small quadrupeds while it is inaccessible to an opossum or a human hand, and

finally, to unite the walls at and over the entrance by true scientific curves. Nothing but an illustration can convey an idea of the nest to those who are unacquainted with it; but for that purpose I may refer my readers to an example in the British Museum.

Apropos of the latter (which is from the other side, the Banda Oriental), I may note that it seemed decidedly bigger than our Buenos-Ayrean nests, and that I was struck by something wrong about the situation of the entrance—namely, that it was on the *left-hand* side instead of the *right*. My impression is that in Buenos Ayres the entrance is invariably on the right hand—a supposition which now remains to be verified.

The nest is placed on the branch of a tree, roof of a house, buttress of a bridge, telegraph-post, top of a stake, or any similar situation. To show how regardless the architects are of man's presence, I may mention that it is not infrequent for a nest to be built on one of the posts of the shearing-corral, notwithstanding the attendant noise and bustle. Of course no concealment of the nest is ever attempted; a satisfactory site is the only thing looked for.

Two nests I have seen which were built on the ground—a most unaccountable situation. One was within fifty yards of a wood; but as it was also only ten from a swamp, I came to the conclusion that the builders had been the two laziest Oven-birds in all the province, and had found themselves unequal to the task of carrying the building-material to the wood.

The lining of the nest only consists of a little dry grass; and the eggs are consequently often much soiled with mud.

Mr. Hudson has drawn attention to the attacks the Oven-bird has to sustain from *Progne tapera*, the latter always forming its own nest in that of the former, and not being content, like *Leptasthenura ægithaloides*, to wait till the proper occupants have done with it.

Four is the largest number of eggs laid, I think; and these may be taken from 15th September to the end of December. A series of thirty-two specimens gives an average measure-

ment of $1\frac{3}{40} \times \frac{3}{40}$. The variation in size is very great, ranging through about $\frac{6}{40}$. The eggs are rather pear-shaped, and quite white in colour.

22. AMBLYRHAMPHUS HOLOSERICEUS.

This handsome bird is only abundant while the maize (of which we annually cultivate two or three acres) is ripening—March, April, and part of May. During the remainder of the year it is confined to the swamps, and is there not only local in its habits, but extremely rare. My journal for the last two years does not contain over a dozen notices of it, except during the above-mentioned months, when, indeed, such entries occur as “May 17th. Counted flock of thirty-six in maize-patch, of which about ten were in immature plumage; also saw a pair in a swamp, accompanied by three young.”

Once, to my surprise, I saw two or three in one of the woods at the end of August, a circumstance so unusual that I took a special note of it.

The young, or those in immature plumage, I have only observed in the autumn.

To see such a flock as is mentioned above, or to watch a pair in one of our fens, gives me the keenest pleasure. In the latter case the tall dark green rushes (on the tops of which the birds are perched) contrast beautifully with the jetty black and mandarin-orange of the plumage, while the loud alarm-notes soon come to be recognized by the ornithologist when associated with a feathered creature so charming.

It is never very shy, least of all so when gathered in flocks, and may be easily approached within shot; but if only wounded, there is no bird quicker in making its escape among weeds and brushwood, winding its way through them like the Corn-Crake or Landrail.

The flight is fairly strong, though not rapid or otherwise particularly noticeable.

Besides the above-mentioned note of alarm or warning, this bird has a singularly melodious whistle, very rarely uttered, and which, indeed, I have only heard some three times. It

consists of, first, a short indistinct note, which is followed by a long clear plaintive whistle, and finishes with three or four other insignificant notes similar to the first. But it is the strength and purity of the prolonged whistle that is so admirable, with something human about its sweet and tender cadences. The fact is, the first time I heard it I could have continued to sit my horse for hours in that swamp and listen, cold winter's day though it was, riding-boots full of water and all!

Those I have dissected, mostly shot at the maize, had, of course, their crops principally filled with broken or entire grains of the same; but two or three had, in addition, a good many small beetles, entire.

Two which I had winged or wounded slightly I endeavoured to tame; but though they took food readily enough, they were very restless, and died within three or four days.

Breeding-Notes.—That *A. holosericeus* breeds in the swamps there can be no doubt; but its extreme rarity has put it out of my power to give much information on the subject. The only nest I ever obtained was brought to me by one of our shepherds, with the following notes:—"Nov. 15th. Nest taken in a swamp (in the neighbourhood of which I had twice or thrice seen the birds previously); in size, shape, materials, and construction resembled that of our Thrush (*Turdus rufiventris*), and was built in, or attached to, some reeds or rushes. Both birds seen."

The two eggs measured respectively $\frac{3.9}{4.0} \times \frac{3.0}{4.0}$ and $1\frac{1}{4.0} \times \frac{3.0}{4.0}$. In shape similar to those of the Starling, and in colour also, pale blue. One had no markings at all; but the other showed a very few small spots, light lilac and dark brown, and one dark brown streak about two lines long, but semicircular.

The above nesting-notes and eggs coincide with a description of those of this bird given, I think, in one of Dr. Burmeister's books or papers.

23. PAROARIA CUCULLATA.

Curiously enough, this pretty bird and sweet songster is now common in our district, while twenty-five years ago it

was not to be found nearer than Dolores, sixty miles to the north-west.

It remains during the whole year, and breeds with us. Quite a wood-frequenting bird, one rarely sees it either in the plains or about the swamps. It is not at all shy, and, particularly in the winter months, may be seen every day in the patio, looking for its share of food from the kitchens, in company with various other birds. One of our men was very successful in trapping them there; and even adult birds soon became tame after being caged. In Buenos Ayres it is one of the most common and prized of caged birds. Those I have seen were fed principally on thistle-seeds, millet, soaked bread, fruit, &c. &c. The leisurely sweet whistle is well known, and, as I have found, is not very difficult of imitation. I have kept a bird responding to me for some time before it discovered the nature of its rival. The young accompany the parents till well on into the winter, but do not sing or acquire their full plumage till the ensuing spring, the head and crest remaining of a dull brick-red in the interval.

Breeding-Notes.—It nests from the end of October to the middle of November, retiring for that purpose to the woods.

The nest is generally placed at the end of a branch of a tala tree, about eight or ten feet from the ground. It is a large shallow construction, built of wild-vine tendrils or twigs and wood, and lined with horse-hair. Sometimes the last material greatly predominates; and I have then seen the nest so frail that one could see through the bottom of it. The uneasy approaches of the birds frequently betray its situation, should an intruder appear in the vicinity.

Three is the largest and most usual number of eggs laid. The clutches of eggs vary greatly in appearance, and still more so in size. The commonest type measures about $\frac{34}{40} \times \frac{24}{40}$, and in colour is of a brownish ground, thickly marked with brown spots. One clutch of three, in my possession, fitly illustrates the above-noted variation. The eggs average $1\frac{4}{40} \times \frac{25}{40}$, while the ground-colour, of which there is a good deal seen, has a greenish tinge; the spots also incline to the blunt end; and in addition there is a dark ring there, more or less pronounced.

24. *TANAGRA STRIATA* (Bird of seven colours).

The "Pajaro de siete colores," as the natives call it, is common enough; and yet, though it remains with us all the year, I have never obtained a nest, nor even been able to ascertain if it breeds in this district at all.

It is generally found in small flocks of four or five, males and females, about the woods and gardens, and in the latter locality does considerable damage among such fruits as figs and grapes. In the winter time they are always to be found in the "Paraiso" (or Paradise) trees in the garden, the berries of which do not ripen till then.

A bold, marauding, songless bird it is; and even its blue, orange, and yellow plumage is not very admirable, in my opinion at least.

25. *LICHENOPS PERSPICILLATA*.

A common bird in the swamps and "pajanales" (grass-coverts). It is not unusual to see it about the homesteading, corrales, garden, and even the outskirts of a wood.

Except in the breeding-season, it is always solitary in its habits; and I have been struck with the preponderance of the black over the rufous birds. I am quite of Mr. Durnford's opinion though, that the black are males, and the rufous females; albeit my belief is founded, not on dissection, but on observations made at the breeding-season.

It is a most solemn, silent, ghostly-looking little sprite; and for a while, from having been very unlucky in my attempts to secure a specimen, I had almost formed a superstitious belief that it was proof against powder and shot. By no means shy, it will stand even being fired at once or twice.

The food consists of beetles, small flies, &c. &c. On one occasion, while watching a swarm of newly-winged ants, I was surprised by the appearance of one of these birds; and the Flycatcher-like way in which it rose from the ground, took a turn or two in the air, and snapped up the ants was something quite new to me.

Its flight has nothing worthy of observation further than that it is never a prolonged or sustained one.

Breeding-Notes.—I have only taken some four nests, and so, as regards the duration of the nesting-season, can only cite from 19th October to 30th November.

These were all situated in swamps, built into the reeds at about a foot from the water, and invariably constructed of the dry blades of a certain kind of water-grass, the finer blades of the same forming the lining. The result is a compact, comfortable little nest, rather neater than what might be imagined from the above description. A fifth nest I discovered in a most extraordinary situation—namely, on the top of one of the roof-tree beams, inside a large open shed, and about fifteen feet from the ground. The building was within a hundred yards of a swamp; and it was nothing unusual to see a *L. perspicillata* inside of it; but had it not been that the nest contained eggs (about which there can never be a doubt), I should have refused to acknowledge the possibility of its belonging to this bird.

None of the above-mentioned nests contained more than two eggs; but I fancy the full clutch must be larger. They average $\frac{3.3}{4.0} \times \frac{2.4}{4.0}$ or $\frac{2.5}{4.0}$. In colour they vary greatly, some having the ground-colour nearly white, while in others it is suffused with a warm pinkish glow. The markings consist of a few spots, streaks, and blotches of black and reddish brown, generally congregated at the blunt end.

26. PROGNE PURPUREA, Linn.

It would be supererogatory on my part to write at any length on this and the following species when the subject has been so ably treated by Mr. Hudson (P. Z. S. 1872, p. 605). Consequently I will confine myself to observing that it is abundant with us, coming in the first week in September, and leaving about the end of March.

There were two entirely black specimens which used to appear annually at the head station; but I have not seen them for the last year or two.

Breeding-Notes.—Immediately on their arrival they begin to examine their old nesting-sites; but the eggs do not seem to be laid till much later, and I have taken fresh ones towards the end of November.

These sites are crannies in the eaves or gables of any building, or various similar situations; but the nest is never so isolated from some contiguous beam or wall as to necessitate its being entirely built of mud, that material being only used to close up the open sides and leave but one entrance-hole. The mud is very coarsely mixed, sometimes with a good deal of grass in it. The lining consists merely of some dry grass.

One of their favourite localities is a beam underneath the eaves of our large wool-store, just at the doorway. It says much for their familiarity that the constant traffic does not deter them from building there.

The eggs are of a beautiful white, pear-shaped, and average $\frac{37}{40} \times \frac{24}{40}$. Six is the largest clutch I have taken.

27. PROGNE TAPERA.

This species is probably as abundant as the preceding; but, as a frequenter of the woods and from the nature of its nidification, it is more diffused, and consequently appears scarcer.

It is also about a month later in coming, appearing in the first week in October, though it leaves at the same time as *P. purpurea*, the end of March.

Breeding-Notes.—As it arrives after *P. purpurea*, it is proportionately later in breeding, while, from being parasitical on *Furnarius rufus*, the date of its nesting varies greatly. Eggs are most generally taken in December; but I once found a nestful of young birds (full-fledged, it is true) as late as the beginning of March.

It only breeds in the nests of the Red Oven-bird (*Furnarius rufus*), either taking possession after the original owners have hatched out and reared their brood, or forcibly ejecting the rightful occupants. Mr. Hudson has been more fortunate than I in witnessing the prolonged and determined warfare displayed on the latter occasions, an interesting account of which he has given in his paper. But he is mistaken in supposing that this peculiar habit of *P. tapera* is unique; for *Leptasthenura agithaloides* (Kittl.), as will be seen further on, is also parasitical on *F. rufus*, though it is content to wait for a disoccupied tenement.

I would note that *P. tapera* only nests, so far as I have observed, in the nests of the Oven-bird which are built on trees, eschewing those situated on posts or houses. It would be rather too much to have to climb up a score of thorny tala trees, and examine as many Oven-birds' nests, on the mere chance of finding in one the eggs of the Swallow; but, fortunately for the oologist, the latter birds resent the approach of any intruder in the neighbourhood of their domain, and by their angry screams and swift dashes generally afford him the necessary clue. Or, as sometimes happens, a stray feather in the entrance intimates that the interior contains, not the despised eggs of the Oven-bird, but those of *P. tapera* or *L. ægithaloides*—prizes both.

P. tapera lines its lodgings with a pile of feathers formed into a nest. Grass, wool, and hair are sometimes added; but the feathers are the principal material, and the amount is usually sufficient to fill up the interior of the Oven-bird's nest.

The eggs, so far as I know, never exceed five in number, are pure white, and average $\frac{36}{40} \times \frac{25}{40}$.

28. PITANGUS BELlicosus.

Called by the natives "Bien-te-veo" ("Well, I see you"), from its cry resembling these words.

Doubtless as well known as it is common. In the woods, swamps, gardens, or about the head station it is equally at home. In the morning, just at daybreak, the noise made is absolutely deafening, each one shouting its cry and screeching energetically, varying the emphasis on the syllables in a rather amusing fashion. At sundown the same thing is noticeable, the chorus being as general as in the morning, and also lasting but the usual half hour. While uttering the cry the feathers on the top of the head are erected, so as to form a very handsome crest of black and yellow; and the head at the same time is frantically jerked about in a way that would dislocate the neck of any respectable bird. All day long it is on the war-path, chasing or being chased by its own kind, or persecuting all other birds, however much

larger than itself. It is a most familiar and impertinent individual, and will alight within two yards of one, cocking its big black head to one side, and remarking, very audibly, that it sees you perfectly. On the whole, too, it is considered to be a bird of rather bad character, a feathered croque-mitaine, a noisy, aggressive, obtrusive bully.

Decidedly omnivorous in its food, flesh, fish, grain, vegetables, and fruit all disappear with remarkable rapidity into that immense black beak. I have been amused at the way it manipulates a piece of meat, whacking it alternately on each side of it against the branch or rail on which it is sitting, preparatory to swallowing the morsel. It almost gives one both toothache and headache to merely look at the operation. The freshwater mollusk already mentioned as constituting the food of *Rostrhamus sociabilis* is also greatly affected by the Bien-te-veo; and one frequently finds old cow-bones close to the swamps, which, by the broken shells scattered round them, indicate the use to which they have been put.

The young are not difficult to rear; but as their note is any thing but musical, and a savage dig from the beak is rather unpleasant, the incentive to do so is not at all great.

Breeding-Notes.—There is no attempt made to conceal the big nest of *Pitangus bellicosus*; one might as well try to hide a hay-stack. It is built of dry grass, fibres or roots, wool, hair, and feathers (the wool, however, is the principal material)—in shape spherical, a little over a foot in diameter, and entered by a hole in the side. While the outside is very ragged and irregular, the interior is neatly felted with wool and hair. It is placed in a tree, often at no great height from the ground. Nests in swamps, too, are not uncommon, built into the reeds, and sometimes only a foot above the water.

The nest is begun as early as the 2nd of August, though I have never taken eggs before the 21st of September. The first brood (for I believe *P. bellicosus* has two in the season) has flown by the middle of November; and fresh eggs may be taken as late as the 22nd of December.

The clutch of eggs never exceeds five; but four is the more

usual number. Ground-colour pale yellow, with red blotches and spots, chiefly at the blunt end. The average measurement is $1\frac{6}{10} \times \frac{33}{40}$, as taken from a large series.

29. MILVULUS TYRANNUS (Scissor-bird).

This species is not uncommon with us, arriving in the beginning of November, and leaving about the middle or end of February. At Baradero, in the north of the province, it arrives in October and leaves early in April. In consequence of its tardy arrival here, I have seen young birds as late as the beginning of February, some entirely without the long tail-feathers, while in others they were but partially developed.

The flight is undulatory, like that of a Wagtail, during which the two tail-feathers open and close like a pair of scissors. Sometimes it hovers for a moment or two with these feathers expanded, so that they resemble a section of a large oval; or it will alight upon a tree or fence in this attitude, and twitter like a Swallow (the only note which it possesses, I think). The crest is but rarely elevated, and then shows black and yellow, similar to that of *Pitangus bellincosus*.

Milvulus tyrannus is not so belligerent as its name would lead one to expect, though it does make a show of tyrannizing over other small birds—chasing them a short distance, but never actually coming to blows.

It is insectivorous of course; and in the rincones, where mosquitos abound, I have taken three nests within a quarter of a mile, on the isolated and stunted tala trees, which are sparsely sprinkled over that peculiar district.

Breeding-Notes.—It breeds in December and the first week of January. The nest is placed, without much attempt at concealment, on a tala tree, from eight to ten feet above the ground, measures about three inches across the interior, is rather shallow, and consists of thin stems of plants, wool, lichens, and thistle-down, pretty compactly quilted together. The lining is of fine roots and fibres, or sometimes wool alone.

The bird frequently sits close; and when disturbed the pair always remain in the vicinity of the nest.

The eggs never exceed three in number. The average measurement is $\frac{3.4}{4.0} \times \frac{2.5}{4.0}$. They are rather smaller copies of those of *P. bellicosus*, being of a pale yellow ground, with reddish spots, which, however, are more equally distributed over the egg. The shell is very fragile also.

30. PYROCEPHALUS RUBINEUS.

Mr. Durnford quotes the native name of this species as "Chirinchi," while here it is known as the "Militario."

It also is common enough, being, like the last, a summer visitor, but arriving earlier, from the 21st of September to 7th of October, according to the state of the season. The old birds leave again in the beginning of February, while the young remain till the middle of April. Compare, as formerly, with Mr. Durnford's Baradero notes:—"Arriving in September and leaving in April. Old birds leave us at beginning of February, young remaining till middle of April." The young, on leaving the nest, resemble the female.

With, perhaps, the exception of *Paroaria cucullata*, *P. rubineus* is the most beautiful bird we possess. As I have come upon a male in the woods, perched on some low stump or branch at the edge of a glade, it has seemed to burn and glow in the bright sunlight like a live coal. It catches and arrests one's eyes instantaneously, though a hundred yards away.

The flight, as becomes one of its Flycatcher-like habits, is very rapid, but short; and it generally has some favourite perch, to which it returns after each excursion in pursuit of a fly or other insect. While uttering its "trilling song, a silvery bell-like sound," as Mr. Hudson fitly describes it, it rises like the Lark, though not so high; and also while descending the wings remain expanded, are held high above their usual level, and have a tremulous motion imparted to them. Another note which it has, particularly when the nest is threatened, is similar to the *pink, pink* of the Chaffinch on like occasions.

It is insectivorous of course; and I have found in the crop remains of various small beetles.

Breeding-Notes.—I have taken eggs from the 19th of October to the same date in December.

The nest is very like that of the Chaffinch, though never quite so compact or neat. It is built of lichens, which are held together with a few horsehairs, and lined with small soft feathers. There is some skill displayed in the concealment of it, though generally situated on some isolated tala tree at about ten feet from the ground, or on the outskirts of the wood.

The eggs never exceed four; but three is the more general number. They are rather pretty, having a yellowish ground, with brown and grey spots and blotches, generally forming a zone round the centre of the egg. The average measurement is $\frac{27}{40} \times \frac{20}{40}$.

31. ZONOTRICHIA PILEATA (Sparrow).

As abundant and as impudent as its European congener, it is not, however, quite so gregarious in its habits.

I must confine myself merely to some remarks on its breeding-habits, as, from its being so common, I have always postponed and neglected any other notes, and consequently have now no data to work upon. One incident only remains upon my memory—namely, the attack of an immense brown moth (*Erebia odora*), some seven inches across the wings, upon one of these birds. It occurred in the daytime; so the moth may have mistaken the bird for one of its own species; but at any rate, there it was, buffeting the Sparrow vigorously with its wings, while the latter kept hopping back, evidently divided between fear of such a bold and big assailant and contempt of the puny blows of which it was the recipient. I went for the moth with a butterfly-net at last, and ended the contest.

Breeding-Notes.—*Z. pileata* has two broods in the season, the first dating from 24th September, and the second from 1st November to end of January.

The usual material for the nest is dry grass, with a lining of horsehair; and it is generally placed on the ground, among the grass or under a fallen branch or thistle-leaf. Other sites

are in the eaves of outbuildings, interior of barns, hay-stacks, &c. &c. (The nest, I should state, is an open one.) If *Z. pileata* chooses a nesting-site in a shed or barn, no amount of traffic or pulling down the nest, will make it give up its building-operations. I remember, one shearing-season, a pair showing such remarkable persistence. Just before the siesta we were in the habit of throwing all the half-filled bags of wool &c. into a pile, in order that there might be no time lost in covering them up should a thunder-storm arise during that hour. Well, these birds thought this was an excellent place for a nest; and every day for over a week, on taking down the pile in the afternoon, I found that they had completed an entire nest, all but the lining, during the two hours of the siesta. Ultimately, however, they desisted, in evident disgust. Another site for a nest was the interior of a bullock-cart, in a fold of the canvas "toldo," the cart not being in use at the time.

Four is the maximum clutch of eggs, the usual number being three. They vary as much in size as in colour; and in a series like mine specimens occur which, but that they were identified in person, would never have been credited to *Z. pileata*. The usual type has a greenish ground, thickly spotted with reddish brown; and an average (of thirty-one specimens) gives $\frac{3.1}{4.0} \times \frac{2.3}{4.0}$ as the measurements.

32. SISOPYGIS ICTEROPHRYS.

Rather rare, there perhaps not being more than two pairs in the woods surrounding the head station. These remain with us all the year round; but, from their rarity and shyness, my notes relating to their habits are very incomplete; so I will merely give a short description of the nest and eggs in the meantime.

Breeding-Notes.—It breeds about the end of October and beginning of November, placing its nest among some twigs or shoots on the trunk of a tala tree, five or six feet from the ground. The nest is shallow, and stragglingly built of dry wild vine-tendrils, lined with fine grass.

The eggs, which I have never found to exceed three in

number, are rather pretty, being of a warm creamy-white ground-colour, with a few bright red spots, principally at the blunt end. They average $\frac{31}{40} \times \frac{23}{40}$.

33. CHRYSOMITRIS MAGELLANICA.

Very abundant; the time when it is least so seems to be the autumn and earlier part of the winter. During the latter part of the summer, and also of the winter, it is gregarious. Its food consists of thistle- and lucern-seed &c. Caged birds get the usual Canary diet, on which they seem to thrive very well. The song is generally considered sweet, and, I think, much resembles that of the tame Canary. As it is also an easily-tamed and hardy cage-bird, large numbers are trapped and sent into town, where they find a ready sale.

Breeding-Notes.—I have taken eggs from 25th September to middle or end of December, though October is the favourite month. The nest is generally placed in some thick bush or tree, at no great height from the ground, and is rather neatly built of small twigs, dry grass, wool, moss, and lichens, lined either with fine grass and wool or with feathers.

The eggs never exceed four in number, while three is the more general clutch. In colour they are a clear bluish white; but a not unusual variety has small red spots on the white ground. I do not recollect ever finding a mixed clutch (that is, a nest which contained both varieties of eggs). A large series gives $\frac{27}{40} \times \frac{19}{40}$ as the average measurements.

34. LEPTASTHENURA ÆGITHALOIDES.

Not uncommon, remaining with us all the year, and breeding. It is generally to be found in pairs, but in no larger numbers.

It is rather a pretty, quaint little bird, and always reminds me of our Tits at home, incessantly moving about the trees, hanging from a twig head downwards, as it strips off all the *Aphides* and other small insects, with erected crest and twittering note. Should the nest be threatened, this note becomes louder and angrier, and the bird, at no times shy, approaches one very closely.

Breeding-Notes.—*Leptasthenura ægithaloides*, like *Progne*

tapera, is parasitical on the Red Oven-bird (*Furnarius rufus*); that is to say, it takes possession of either a recently disoccupied or old nest of the latter, and entirely fills up the interior with wool, dry grass, and (principally) feathers: the last-named might be counted by thousands in some cases, I think. It is strange that two birds should be dependent on *F. rufus* for nests; but this is only on a par with such anomalies as that of *Pseudoleistes virescens*, which either makes a nest for itself or deposits its eggs in those of other birds, or that of a nest of *Zonotrichia pileata* containing thirteen eggs, of three different species, not one of which is a Sparrow's.

L. ægithaloides breeds from the middle of October to the end of November, laying three or four roundish eggs, of a warm or creamy-white colour, and averaging $\frac{27}{40} \times \frac{21}{40}$.

35. TROGLODYTES FURVUS.

Very common, and frequents both the houses and woods. It is a quiet, familiar, prying little individual, and has hardly any fear of man. One used to haunt our dwelling-house, hopping in and out of all the rooms, and inspecting the ceilings and corners for its insect prey. On one occasion, while I was lying on my bed reading, during the siesta time, it alighted first on the top of the bedstead, then on my brow, and from there hopped onto the book I was reading, retaining that position sufficiently long to take a good look at me before flying away again! The same bird built its nest on a shelf, behind some phials, in one of the other rooms, but from some caprice left it when finished.

I would beg to note, by the way, that *T. furvus* carries its tail straight, and not after the ridiculous fashion of the British species.

It has rather a pretty little song, two or three notes of which it often indulges in during the night. Its more general utterance is an angry harsh chatter, like a rolling string of r's.

Breeding-Notes.—In the woods *T. furvus* constructs its nest in any hole in a tree, filling up the cavity with a lot of the smallest and most thorny of tala twigs, then a framework of horsehair, and lining it with soft small feathers, often of very

pretty colours. It is open, not domed. When the space is limited the twigs are dispensed with, and only hair and feathers used. One of the latter description, which I remember taking, was just within a foot of the larger cavity in the same tree in which an opossum had taken up its abode.

About the houses the sites selected are rather curious too—in the roof of a barn or outhouse, the nozzle of a pump, mouth of a waterpipe, rose of a watering-can (which had been suspended to a tree in the garden), the sleeve of an old coat left by a workman in the killing-shed, &c. &c. A last instance is a nest in a small canvas bag hanging in a veranda; the bag was only a foot square, and, from the stiffness of the material, required the mouth to be actually wedged open by the body of the bird to permit ingress and egress.

It breeds from about the 20th of October to the middle of January, eggs having been taken on the latter date. I have noticed, however, that the nest takes nearly three weeks to construct.

Like Mr. Durnford, I formerly imagined that five was the number of eggs laid, but have lately taken a clutch of seven, the only one out of some scores of nests examined. Mr. Durnford found even so many as eight in a nest ultimately. They are of a pink ground-colour, thickly spotted with a darker shade, and average $\frac{28}{40} \times \frac{20}{40}$.

36. CYANOTIS AZARÆ.

Very common in all our swamps. It is so regardless of man that I have had the utmost difficulty in frightening a specimen to such a distance as would ensure its not being blown to pieces, even with a charge of No. 10 shot from a gun-stick.

Breeding-Notes.—I have taken eggs from 20th November to 3rd January, but believe it breeds earlier than the first-named date. The nest is built into two or three reeds, about eighteen inches from the surface of the water. It is rather deep, the walls very thin but astonishingly strong, being composed of the dry papery outside of a species of water-rush, gummed together with the glutinous contents of certain

raspberry-like ova (as I take them to be)*, and lined with the dry thread or fibre from the interior of the same plant. The whole structure is about four inches in length (outside measurement), and one and a half in diameter, the sides being barely one quarter of an inch thick, and the bottom half an inch. There is not a single straggling fragment of material about it; it is very light and delicate; and yet it may be tossed about any way, or even packed among empty Swan-eggs without receiving damage—the neatest nest we have, in short. It is rather difficult to find in the swamps, being so small, and placed low down, while the rider is raised just as high again in the saddle; besides which, it harmonizes admirably in colour with the rushes and reeds amongst which it is situated.

The general clutch of eggs is two; at least I never took more, and have found even that number considerably incubated. They are of a pale cream-colour, which darkens toward the blunt end, and occasionally merges into a faint brownish ring there. The average measurement is about $\frac{2.5}{4.0} \times \frac{1.8}{4.0}$.

37. CYGNUS NIGRICOLLIS. “Cisne.”

As there are a great many swamps and fens here, it is but natural that all the waterfowl should be represented in extraordinary numbers; and accordingly even Swans are nearly as abundant with us as Ducks are in other districts. I have counted about two hundred on one small lagoon in a swamp; and the latter is but one in a whole network of swamps and watercourses. Another great fen, bordering our land, is known as the Cañada de Cisneros, or Swamp of the Swaneries, an eminently suggestive name for the oologist, one which its character well bears out. About the beginning of

* This is rather a peculiar object, consisting of a number of eggs, each about the sixteenth of an inch in diameter, gummed together into a mass and attached to some rush or plant in the swamps above the water. The shells are raspberry-coloured, and brittle, like glass; the contents are a transparent colourless mucilage. They are very common. The only change in their appearance is that the eggs sometimes fade in colour.

the century, the first Christians (so-called in contradistinction to the Indians) who reached this district were Gauchos, who, in pursuit of Swans for the sake of their skins, made occasional excursions from inside the frontiers. Their weapon was the "boleadores," or balls, of the same nature as those used for catching cattle and horses, and which are now sufficiently well known in England for me to dispense with a description of them. These "Swan-balls" differed only in being made of wood, so that they should float on the water if the Gaucho missed his aim. The Swans were tamer and easier to approach then; and the rider took care always to come down the wind, getting within forty or fifty yards before they took the alarm. Then a desperate push, if the water was not too deep, would gain another ten yards, as the Swans are taken at the disadvantage of being compelled to rise *down* the wind. The balls are whirled, thrown, and, twisting round the wings and neck of the bird selected, render it quite helpless. I once myself nearly ran down a *C. coscoroba*, in water some three feet deep. Unfortunately I had nothing but a riding-whip; and as I swerved slightly in order to use it, the Swan doubled and went back up the wind, leaving me drenched with the water thrown up by my horse's plunges and bounds during the chase.

Nowadays it is difficult to get within gunshot-range of *C. nigricollis* without regular stalking. I have stood out from the cover and fired again and again at the birds without raising them; but they always preserved an exasperatingly accurate distance of some twenty yards over the hundred, allowing the lead to patter on the water that distance short every time. The best method is to take one's stand on some island among the swamps, about sundown, when the Swans are passing from one lagoon to another. This they generally do, either in pairs or singly, flying low, and making almost no deviation on perceiving the sportsman. Accordingly the sensation is something like firing at the side of a house; it is hardly possible to miss.

When flying, this Swan constantly utters a whistling note, which, in conjunction with the noise of the wings, is always

sufficient to notify its approach. This whistle is its only note or call, and also serves to express warning and alarm.

Breeding-Notes.—It nests very early; for I have taken a nest on the 24th of July, the five eggs of which were much incubated. July and September are the favourite months; but eggs may be taken as late as the middle of November. The position chosen is always in one of the largest and deepest swamps, the nest being placed among the thickest rushes, at some distance from one of the lagoons, but connected with it by a lane of clear water; for the birds always leave the nest by swimming. It is built from the bottom of the swamp, sometimes through four or five feet of water, above the surface of which it rises a foot or a foot and a half. The diameter at the top is about two feet, the depression for the eggs slight, with a few feathers from the Swan scattered about it, but not sufficient to be called a lining. Dry rushes, of the common kind known as "hunco," form the building-material. It is a pretty strong, compact structure, but not sufficiently so to support a light man's weight, as I found to my cost on springing from my horse onto the first nest I found; for it immediately subsided, and left me waist-deep in the water, with a young horse to mount proverbially known for its quickness, and barebacked into the bargain. Never mind how I managed to regain my seat ultimately; but I carried off the eggs in triumph.

Nothing would be easier than to expatiate on a certain day in the Cisneros swamp, such as I had two years ago, with a tame old horse under me, firm ground underneath, the water unusually clear and free from weeds, and so deep that only the seat of the saddle was above its surface. I spent three hours in the heart of this swamp, on a calm sunny day, floating noiselessly along the narrow open channels among the bright green rushes—now seeing a Swan swim slowly away from its great nest, where lay the three or five large handsome eggs—again stopping to poke up the suspended nest of that curious aquatic opossum (*Didelphys crassicaudata*, Desmarest), and watch the truculent little villain spring out and also swim or dive away puffing viciously—then turning my horse to

where the head and neck of a watchful Maguari Stork (*Ciconia maguari*), towering above the hunco, betrayed that it was standing up on its nest, while the many-coloured little *Cyanotis azaræ* crept up and down the green rushes in close proximity to me, and a hundred different sounds and cries spoke of nearly as many different species of waterfowl present, and kept me busy making mental memoranda. But the outline of the sketch is quite sufficient, without all the fascinating accessories.

I have seen the female conveying the young on its back, and on one such occasion managed to press the bird so close that I captured one of the young in down. Though only a few days old, it gave me a great deal of trouble to catch it, diving always just as the horse's nose almost touched it; and, but that the water was so clear that I could see and follow its motions and so tire it out, it would have proved too quick for me. It had no sign of the black head and neck, of course, being in down; the colour was pure white, with a black beak.

The general clutch of eggs is either three or five. I only once ever met with a nest containing six. They are of a smooth glossy cream-colour; and the average measurement of a large series is $3\frac{3}{4} \times 2\frac{2}{4}$, varying from $4\frac{9}{40} \times 2\frac{24}{40}$ to $3\frac{28}{40} \times 2\frac{18}{40}$.

38. CYGNUS COSCOROBA. Native name "Ganso," or Goose.

Common, but not nearly in such large numbers as the last, though in the month of August I have seen flocks of from eleven to seventeen. As a rule it is to be found in pairs. The occurrence of flocks in the above-mentioned month seems strange; for it is generally breeding then, and, though affecting certain favourite localities, does not nest in colonies. It does not associate with *C. nigricollis*, though, of course, it is often found in the same lagoons. Even more wary than the latter, it is also more shy, and usually takes flight when alarmed. The note is a loud trumpet-call, uttered both when flying and on the water, if its suspicions should be aroused. In the latter case the male and female answer each other alternately with

it, swimming about uneasily the while. Of the two species, *C. nigricollis* and *C. coscoroba*, the one under note is much the handsomer. It bears itself more gracefully when swimming, the neck curved and the wings raised, after the true Swan model, while the brilliant carmine beak and caruncles contrast admirably with the plumage (entirely white except the black-tipped wings). Iris mottled blood-colour, pupil black.

Breeding-Notes.—My information on the subject is not so full as might be desired, from always having postponed beating up the favourite nesting-locality of *C. coscoroba*, where the larger swamps merge into the brackish lagoons and tidal creeks of the rincones. It also breeds further inland, in similar localities to those of *C. nigricollis*; and I have seen or been told of nests in such large fens as those of the Cisneros, the Mangrulla, and the Arroyo Grande, all in the neighbourhood; but these are the exceptional cases, I believe. In these latter the situation, materials, &c. of the nest are identical with those of *C. nigricollis*. The neighbourhood of the Laguna de Milan is our great locality, however; and I have known one of our shepherds there gather as many as thirty or forty fresh eggs in a day, paddling about the isolated and otherwise inaccessible islands and low grounds in an old sheep-trough. The description and situation of a nest I took on the marshy shore of the lagoon, as I passed in a boat one day, applies, this man tells me, to nearly all. It was placed about a hundred yards from the water, on marshy ground, separated from the mainland, however, by a creek not to be passed on horseback. There was no vegetation to conceal it, the birds evidently relying upon the difficulty of access for security. Built of mud and rushes, about a foot and a half high, with a considerable depression for the eggs, the latter lined with dry grass and rushes. Both birds remained close to the nest till I had landed and approached within a few yards. My informant also stated that as many as eight or nine eggs are laid, which, however, I consider doubtful. I once saw a nest with five—a clutch the remembrance of which still haunts my memory; for I was in too great a hurry to stop and lift it at the time.

As early as July 10th I have seen a nest in course of construction, while the preceding nest was observed on the 28th November; but, as already stated, August is the general breeding-month. The young are said to suffer a good deal from the attacks of the Carancho (*Polyborus tharus*), probably from the fact that *C. coscoroba* is more frequently seen on land than *C. nigricollis*, and accordingly the young flappers are liable to be pounced upon before they can regain the water.

The eggs are smooth, but neither so glossy nor so cream-coloured as those of *C. nigricollis*; besides which they are decidedly smaller, the few specimens in my collection averaging $3\frac{1}{4} \times 2\frac{1}{4}$, and of a proportionately rounder shape.

[To be continued.]

II.—*Field-Notes on the Birds of St. Vincent, West Indies.*

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As the physical geography of some of the West-Indian Islands has been considerably modified since the advent of Europeans, chiefly by the clearing away of the virgin forests in order to plant sugar-canes, and as in some instances these changes have led to the extinction of several forest-loving species, I will preface my notes on the birds of St. Vincent by a short description of its physical geography.

St. Vincent, like its neighbour St. Lucia, is of volcanic origin; a lofty ridge or backbone, commencing with the Soufrière on the north, runs due south across the whole island. This ridge has many sharp and pointed peaks, all, however, covered to their very summits with virgin forests. The Soufrière is said to be 3000 feet high; but it is probably not the highest point of this ridge. Numerous spurs descend on either side from this central chain; and on the western or leeward side they are very steep and precipitous in some places; so that the "high woods" or virgin forests here approach the sea-coast much nearer than they do on the eastern or windward side, where,